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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/989,251	11/20/2001	Wilhelmus Hendrikus Alfonsus Bruls	PHNL 000655	9628

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS  
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BRIARCLIFF MANOR, NY 10510

EXAMINER

CZEKAJ, DAVID J

ART UNIT PAPER NUMBER

2616

DATE MAILED: 10/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/989,251	<b>Applicant(s)</b> BRULS ET AL.	
	<b>Examiner</b> Dave Czekaj	<b>Art Unit</b> 2643 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 02 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 6-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 6-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 January 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/1/05 has been entered.

### ***Response to Arguments***

On pages 4-5, applicant argues that He fails to disclose using statistical information of the pixels. While the applicant's points are understood, the examiner respectfully disagrees. See for example He figure 2 and column 5, lines 24-46. There He discloses increasing or decreasing pixel values on either side of the edge center. The examiner notes that the current statistical information is used in the process of determining whether to increase or decrease the pixel value. Therefore the rejection has been maintained.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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3. Claims 1-3 and 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Faroudja (5754248) in view of He et al. (6600517), (hereinafter referred to as "He").

As for Claim's 1, 2, and 6-8, Faroudja teaches decoding the compressed encoded SIF video signal to obtain a decoded video signal (Faroudja: Column 5, lines 27-46), the output of a decoder being applied to a video line multiplier (58) (Faroudja: Column 12, lines 33-37; See also Figure 15). The vertical non-linear enhancer (60) then spectrally expands the line-multiplied signal in the vertical domain (Faroudja: Column 12, lines 44-46; See also Figure 15). The vertical non-linear enhancer is applied to a frame multiplier (62) prior to display (Faroudja: Column 13, lines 57-65; See also Figure 15). Although Faroudja fails to specifically teach the use of edge enhancement that is carried out by peak filtering by a spread of pixel values, He does. He teaches that the output of the decoder used in his invention is transferred to a post processing circuitry for additional processing (He: Column 4, lines 58-63; See also Figure 1). The post processing circuitry enhances or steepens the edge transition (He: Column 5, lines 23-25). This is achieved by two techniques: 1) increasing or decreasing pixel values on either side of the edge center; and 2) replacing pixels close to the edge center with pixels away from the edge center (He: Column 5, lines 26-31). Since this method of enhancement is just sharpening the edges of the image, it therefore would have been obvious to one of ordinary skill to apply a form of edge enhancement to sharpen the edges of the images for additional clarity.

Regarding claims 3 and 9, Faroudja teaches vertically enhancing the image. He also shows that the degree of vertical spectral expansion should be correlated with the amount of increase in the line rate (Faroudja: Column 12, lines 56-58). This shows that by increasing the number of lines during the spatial up-conversion is the same idea as vertically up-converting the lines of the image. Although Faroudja fails to specifically teach that horizontal spatial up-conversion is after the temporal up-conversion, the examiner notes that this is within the level of one of ordinary skill. Faroudja teaches both size and frame rate changes can happen in any order. Further, once the horizontal spatial up-conversion is increased, the time between vertical sync increases thus making the temporal up-conversion more difficult (Faroudja: Column 12, line 60 to Column 13, line 14). Therefore it would have been obvious to one of ordinary skill to do the horizontal spatial up-conversion after the temporal up-conversion to reduce the processing loads.

As for Claim 10, Faroudja teaches a recording and transmitting system (Faroudja: Column 2, lines 19-38). This recording and transmitting system is used with the limitations discussed in the above rejections

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dave Czekaj whose telephone number is (571) 272-7327. The examiner can normally be reached on Monday - Friday 9 hours.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on (571) 272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DJC

  
VU LE  
PRIMARY EXAMINER